the middle (in the antero-posterior sense) of each plate and the other very close to the hind margin, these rows of setae almost as in the male but the setae stronger and more spindle-shaped.

Male holotype, female allotype and many paratypes from *Numida meleagris major* Hartlaub (Uganda Tufted Guineafowl), Buruli, Buganda Province, Uganda, numerous other paratypes from same host, various Uganda localities. Types in British Museum.

The genus and species are named in honour of Miss Theresa Clay, as a small recognition of her outstanding work on the Mallophaga of Galliformes.

References.

Bedford, G. A. H., 1931. New Genera and Species of Mallophaga.—17th *Rept. Dir. Vet. Services and Anim. Indust., S. Africa*, pp. 283-297.

Bedford, G. A. H., 1936. Notes on Species of Trichodectidae with Descriptions of New Genera and Species.—*Onderst. Jl. Vet. Sci. and Anim. Indust*,. 7, pp. 33-58.

Clay, T., 1938. A Revision of the Genera and Species of Mallophaga occurring on Gallinaceous Hosts, Part I.—*Proc. Zool. Soc. Lond.* Ser. B, Vol. 108, pp. 109-204.

Cummings, B. F., 1914. Descriptions of five new Species of Anoplura and Mallophaga.—*Bull. Ent. Res.*, 5, pp. 155-177.

Piaget, E., 1880. Les Pédiculines. Leyden.

New African Acrididae (Orthoptera)

by

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The present paper contains descriptions of 6 new genera, 16 new species and two new subspecies of Acrididae, mostly collected by entomologists working on locust investigations in various regions of Africa during the last few years. The types are deposited in the British Museum, unless stated otherwise.

Subfamily **ACRIDINAE.**

Gelastorhinus africanus sp.n. Figs. 1-4, and 14.

This is the first African member of a genus well represented in Indo-Malaya, with one species in Madagascar.

♂ (*type*). Antennae much longer than head and pronotum, joints 4-8 somewhat expanded and smooth, the rest rounded and punctured, strongly elongate. Head about as long as pronotum, slightly ascendant. Frontal ridge constricted and convex at the fastigium, sulcate elsewhere, weakly expanded between antennae, becoming narrower again above the ocellus, but gradually widened again below it; viewed in profile, the ridge is weakly prominent above the antennae and slightly concave below them. Fastigium of vertex parabolic, a little longer than wide at the base; transverse sulcus semicircular; foveolae of vertex flat, elongate, punctured. Vertex with a weak median carinula commencing at the transverse sulcus and disappearing on the occiput.

Pronotum weakly rugulose, more densely so in metazona, which is equal to one third of the whole length. Hind margin very broadly rounded. Lateral carinae straight and parallel in front of the first sulcus, very slightly incurved in the rest. Lateral lobe twice as long as its height. Elytra reaching a little beyond the hind knee; apex narrowly parabolic, but not actually acute; venation loose, with fairly regular false veins in the discoidal and the interulnar areas.

Hind femur slender; its upper carina ending in a minute spinule; upper outer angle of the knee subacute, but less elongate than the upper inner angle which is acutely attenuate; both knee-lobes equally acute. Prosternum with a small but acute tubercle on the anterior margin. Mesosternal lobes contiguous in the middle. Last abdominal tergite deeply roundly excised. Supraanal plate elongate-oval. Cercus laterally compressed, ribbon-shaped, with roundly truncate apex, reaching a little beyond the apex of abdomen. Subgenital plate small, obtuse.

General coloration dirty-greenish laterally, reddish-brown above, with a darker brown postocular stripe, continued along the upper edge of the pronotal lobe on the radial area of the elytron. Hind knee with blackish semilunar spots. Hind tibia reddish.

♀ (*paratype*). Antenna as long as head and pronotum, expanded in the basal half. Fastigium of vertex broadly parabolic. Mesosternal lobes narrowly separated in the middle.

Total length ♂ 28, ♀ 46; antenna ♂ 14, ♀ 15; head ♂ 5, ♀ 7; pronotum ♂ 5, ♀8; elytra ♂ 23, ♀ 32; hind femur ♂ 16, ♀ 23 mm.

French Sudan. Dia, Macina, 13.1.1937, 3 ♂♂ (including the type), 4 ♀♀ (Mission d'Études de la Biologie des Acridiens).

Type will be deposited in the Museum National d'Histoire Naturelle, Paris; three paratypes are in the British Museum.

SPOROBOLIUS gen. nov.

Similar to, and related to *Platypternodes* I. Bolivar, but differing from it in the head being longer than pronotum, with the fastigium of vertex almost as long as an eye; in the elongate mesosternal interspace, and in the elongate and laterally compressed male subgenital plate. The structure of the latter is such as observed in the little specialised members of the group Mesopses, e.g. in the Indian *Dhimbama* Henry 1940 (Trans. R. ent. Soc. London, 90:505), from which genus *Sporobolius* differs in broader fastigium, in the shape of mesosternal interspace (constricted in *Dhimbama*), in the venation of male elytra and in shorter male subgenital plate.

Antennae long, basally strongly expanded. Head longer than pronotum. Face almost horizontal; frontal ridge sulcate throughout, gradually widened towards clypeus; lateral facial carina very weakly curved. Fastigium of vertex about as long as an eye, convex above, with a median carinula; foveolae of vertex very long, narrow. Pronotum with the disc practically flat; median carina low; lateral carinae distinct in prozona, obsolescent in metazona; first sulcus obsolete; second and third sulci fine; lateral lobe much longer than deep, with the lower margin slightly sinuate. Prosternum slightly convex. Mesosternal lobes in male elongate; their interspace longer than wide, widened behind; metasternal lobes contiguous on a long straight line. Elytra and legs as in *Platypternodes*. Male cercus simple; subgenital plate large, sub-acute, laterally compressed.

Genotype: *Sporobolius darlingi* sp.n.

Sporobolius darlingi sp.n. Figs. 10-13.

♂ (*type*). Antennae half as long again as head and pronotum together, strongly expanded in the basal fourth part, where several strongly transverse joints are almost completely fused. Head distinctly longer than pronotum, weakly convex in profile. Fastigium of vertex half as long again as broad, almost parallel-sided with rounded apex; median carinula obsolescent between the eyes. Pronotal disc punctured near the anterior margin and in metazona. Lateral carinae straight, slightly diverging backwards. Elytra reaching the apex of abdomen. Scapular area strongly expanded, with regular oblique veinlets; radial veins practically straight; discoidal area moderately broad, with a double row of cells separated by an irregular false vein; interulnar area a little broader than the discoidal, with a small number of large cells. Hind femur moderately narrow, weakly narrowed apically. General coloration light straw-yellow, with very weak and indefinite pale brownish streaks on the sides of thorax.

Anglo-Egyptian Sudan. Wady Showill, near Um-Darag, north-eastern Kordofan, 11.VIII.1933, 2 ♂♂ (*R. C. Maxwell Darling*).

This is the species recorded by its collector (Bull. ent. Res. 1934, 25:76) under the name *Platypternodes* sp.n. as occurring amongst the tussock-grass *Sporobolus glaucifolius* Hochst. on heavy clay soil. Since this was probably the food-plant of the insect, the name of the new genus is derived from it, while the species is dedicated to Mr. R. C. Maxwell Darling in recognition of his many years' work on locust investigations in the Sudan and Arabia.

Gymnobothrus carinatus sp.n.

Similar in size and general appearance to the genotype, *G. linea-alba* I. Bolivar 1889, but well distinct from it in the structure of pronotum, more obtuse head and shorter antennae.

♂ (*type*). Antennae scarcely longer than head and pronotum together, heavy, distinctly flattened basally. Head short and thick. Frontal ridge convex in profile, forming a broad arch with the fastigium; surface coarsely punctured throughout, deeply excavate from ocellus downwards. Fastigium of vertex parabolic, considerably longer than wide, shallowly concave. Foveolae of vertex kidney-shaped, deep, its width equal to the width of the upper margin, which is coarsely punctured. Pronotum relatively short and broad, weakly constricted, distinctly rugulose. Median carina strongly raised, very acute, cut by the median sulcus in front of its middle. Lateral carinae well developed, weakly roundly inflexed in the middle of prozona, excurved and distinctly divergent in metazona. Hind margin well produced, its angle a little over 90° with the tip rounded. Elytra extending about 2 mm. beyond hind knees.

Coloration and pattern as in *G. linea-alba* I. Bol.

♀ (*paratype*). Antennae shorter than head and pronotum. Fastigium of vertex as long as broad. Lateral pronotal carinae not very distinct, punctured. Elytra extending a little beyond hind knees.

Total length ♂ 14, ♀ 17.5; pronotum ♂ 3.2, ♀ 3.8, elytra ♂ 12, ♀ 14.5; hind femur ♂ 9, ♀ 12 mm.

South Africa. Groote Schuur, Cape Peninsula, Cape Province, VII. 1929, 1 ♂, 3 ♀♀; V. 1931, 3 ♂♂ (including the type), 14 ♀♀; VIII 1931, 1 ♀; Kirstenbosch, XII. 1930, 4 ♂♂, 4 ♀♀; Constantia Nek, Viii, 1931, 1 ♀ (*K. H. L. Key*).

There is the usual series of constant colour forms in this species, including some almost black specimens with a conspicuous buff median dorsal stripe. An interesting colour form, not known to me in other species of the genus, is represented by two females which have dark-green dorsum and exhibit remarkable resemblance to the European *Omocestus viridulus* (L.).

Paratypes of this species will be deposited in the South African Museum, Capetown.

KEYA gen. nov.

In I. Bolivar's key to genera of the group Phlaeobae (1914, Trab. Mus. nac. Cien. nat., Madrid, Zool., 20:72), this new genus runs down to the vicinity of *Cymochtha* Karsch, but is not really closely related to it, differing strongly in the convex fastigium of vertex with the lateral margins not acute, but fairly broad and punctured. In this latter respect, *Keya* approaches *Paracomacris* Karsch, which, however, has concave fastigium, incomplete lateral pronotal carinae and specialised elytral venation. The exact taxonomic position of the new genus can scarcely be defined in the present state of our knowledge, but its independent status is beyond any doubt, and I have much pleasure in dedicating the genus to Dr. K. H. L. Key, as a tribute to his excellent work on the ecology and taxonomy of Acrididae of South Africa and Australia.

Small for the group, very strongly laterally compressed. Antennae heavy, ensiform. Head subequal in length to pronotum. Face strongly reclinate; frontal ridge sulcate. Eye large, oblique, subacute apically. Fastigium of vertex roundly produced, convex both transversely and longitudinally, with a thick median carinula and low margins which tend to converge behind. Pronotum strongly compressed laterally, but not constricted; disc very weakly tectiform; median carina low but acute, cut by the typical sulcus only; lateral carinae straight, fairly thick in prozona, narrowed in metazona, reaching the hind margin; prozona about half as long again as metazona, which is very obtusely angulate behind. Lateral pronotal lobe little longer than high; lower margin strongly sinuate. Prosternum unarmed. Mesosternum punctured, narrow, its anterior margin broadly parabolic, projecting forward; mesosternal lobes transverse and their interspace narrower than a lobe in both sexes; metasternal lobes contiguous in male and narrowly separated in female. Elytra a little shorter than abdomen; venation rather loose, as in *Cymochtha*; wings normal. Male genitalia unspecialised; valvae of the female ovipositor heavy, punctured, with thick apices. Hind legs disproportionately long; femur slender, with rounded knee-lobes, without stridulatory apparatus; tibia with 14-17 spines on each side, with the inner spurs a little longer than the outer; tarsal arolia large, as long as a claw. Coloration brown, or buff with darker and lighter stripes.

Genotype: *Keya capicola* sp.n.

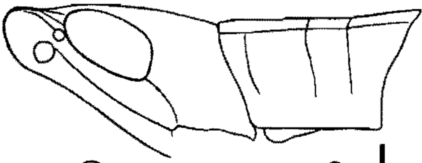
Keya capicola sp.n. Figs. 5-9.

♂ (*type*). Antennae a little longer than head and abdomen, expanded in more than the basal third.

Face rugulose. Frontal ridge coarsely punctured throughout; convex and rather wide between the antennae, becoming narrower and concave from their base to the ocellus, gradually expanding, while remaining concave below the latter. Lateral facial carina broadly bow-shaped, rather acute. Fastigium of vertex about as long as wide. Surface of pronotum obtusely rugulose; metazona punctured both on the disc and on the lateral lobes. Elytra not quite reaching the base of the supra-anal plate.

General coloration light-brown, mottled with dark-brown; dorsal side with a light-buff median stripe enclosed between two dark-brown ones; elytra with a light radial line. Hind femur with blackish dots along the upper carina; hind tibia testaceous.

♀ (paratype). Antennae shorter than head and pronotum, expanded in the basal half. Fastigium of vertex weakly transverse, broadly rounded.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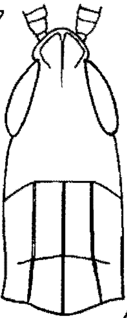
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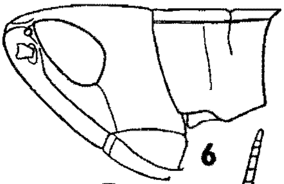
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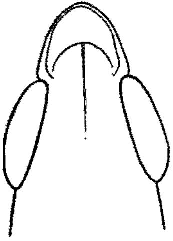
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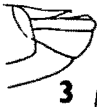
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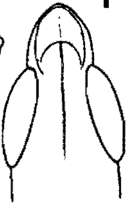
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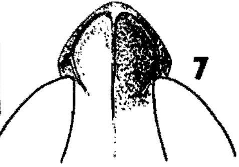
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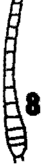
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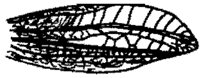
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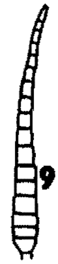
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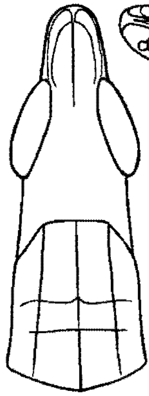
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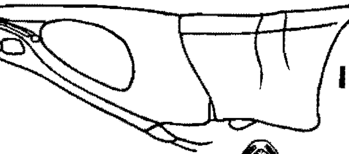
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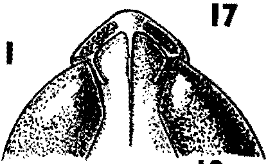
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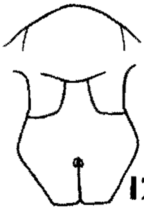
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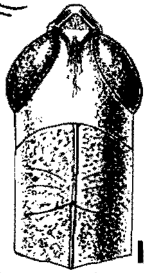
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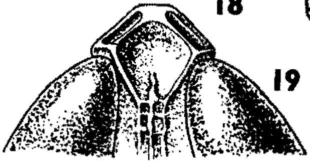
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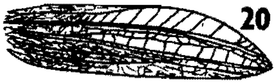
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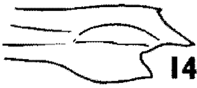
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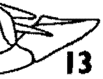
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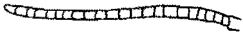
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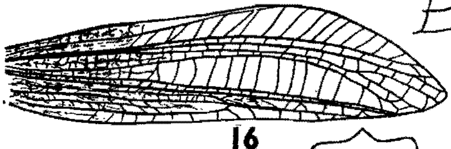
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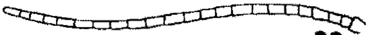
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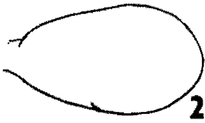
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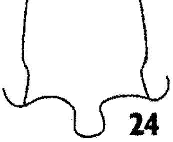
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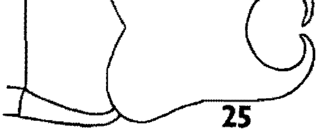
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Total length ♂ 14, ♀ 19; pronotum ♂ 2.8, ♀ 3.8; elytra ♂ 8, ♀ 11; hind femur ♂ 10, ♀ 14 mm.

South Africa. Cape Province: no exact locality, 1 ♂, 2 ♀♀; Cape Peninsula, 1928-1930, 5 ♂♂, 2 ♀♀; Camp's Bay, I. 1930, 4 ♂♂, 2 ♀♀; Lakeside, I. 1930, 1 ♀; Lion's Head, V. 1931, 1 ♂ (*type*).

Paratypes of this species will be deposited in the South African Museum, Capetown.

AFROHIPPUS gen. nov.

Related to *Aulacobothrus* I. Bolivar 1902, but well distinct from it in the cylindrical pronotum, rounded above and with the lateral carinae almost, or quite, obsolete; in the typical pronotal sulcus placed well behind the middle; in hyaline, somewhat inflated and abbreviated elytra; and in practically abortive wings.

Antennae long, filiform. Head shorter than pronotum; face strongly oblique; frontal ridge sulcate throughout, weakly and gradually narrowing from clypeus to fastigium. Fastigium of vertex transverse, weakly concave (except in one species where it is weakly convex); foveolae of vertex lying on oblique plane, well concave, or at least indicated by coarse punctures; lateral margins of fastigium convergent behind, and continued between eyes close to the median carinula, which is irregular, but present. Pronotum short, cylindrical, rounded above, surface punctured, with smooth intervals between punctures; anterior margin rounded, posterior truncate or broadly rounded; median carina low; lateral carinae completely absent or only faintly indicated by a smoother line; all sulci fine, the first two sulci not reaching median carina and the third cutting it well behind the middle; lateral lobe with the lower margin rounded-angular in the middle. Prosternum simple. Ster-

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Gelastorhinus africanus sp.n.
Fig. 1. ♂ head and pronotum in profile. 2. ♀ vertex. 3. ♂ apex of abdomen, side view. 4. ♂ vertex.
14. ♀ posterior knee, external view.

Keya capicola g. et sp.n.
Fig. 5. ♀ head and pronotum from above. 6. ♀ head and pronotum in profile. 7. ♂ vertex. 8. ♂ antenna. 9. ♀ antenna.

Sporobolius darlingi g. et sp.n.
Fig. 10. ♂ head and pronotum from above. 11. ♂ head and pronotum in profile. 12. ♂ sternum. 13. ♂ apex of abdomen, side view.

Afrohippus leai g. et sp.n.
Fig. 15. ♂ head and pronotum from above. 16. ♂ elytron.

Afrohippus taylori sp.n.
Fig. 17. ♂ elytron. 18. ♂ vertex.

Afrohippus keyi sp.n.
Fig. 19. vertex, 20. ♂ elytron.

Pnorisa squalus (Stal).
Fig. 21. ♀ left antenna.

Pnorisa carinata sp.n.
Fig. 22. ♀ left antenna.

Amphiprosopia gwynni sp.n.
Fig. 23. ♂ cercus, lateral view. 24. ♂ supra-anal plate and hind margin of last tergite, dorsal view. 25. ♂ subgenital plate ventral view

num punctured; mesosternal lobes more or less transverse, broadly separated. Elytra not longer, or distinctly shorter, than abdomen, hyaline, somewhat inflated; scapular area strongly expanded; discoidal area very narrow, except in the basal third; interulnar area wide, with regular crossveins. Wings more or less abortive. Hind femur with well developed and long stridulatory file. Inner claws of hind tibia regularly curved, longer than the outer ones. Tarsal arolia large. Male genitalia normal; female ovipositor with stout, short valves. Abdominal tympanum large, open.

Genotype: *Afrohippus leai*, sp.n.

This new genus includes three new species, and one previously described in the genus *Aulacobothrus*; they are all enumerated below.

Afrohippus leai sp.n. Figs. 15 and 16.

The largest member of the genus, resembling in its general appearance the Palaearctic *Chorthippus tenuis* (Brullé, 1832). (See Uvarov, 1934, Eos, 10:87), though of course differing in generic features.

♂ (*type*). Antennae much longer than head and pronotum, their middle joints 3-4 times as long as wide. Face in profile weakly convex; its surface smooth, but not shiny. Frontal ridge deeply and broadly excavate throughout, with strongly raised, shiny obtuse margins; surface punctured near the clypeus and with a trace of irregular median carinula near the fastigium. Fastigium of vertex rhomboidal, obtusangulate anteriorly; surface slightly concave; median carinula irregular, present only in the posterior part of the fastigium and obsolescent in the occiput; foveolae of vertex deep, about twice as long as wide, with the upper and lower margin weakly curved.

Pronotum with large and dense, shallow punctures, which are denser and smaller in metazona. Hind margin obtusely angulate. Lateral carinae absent (though in some specimens there is a faint suggestion of parallel carinae visible in certain light only.) Elytra just reaching the apex of abdomen; venation as figured. Wings shorter than half the elytra. Hind femur relatively slender. Supra-anal plate parabolic, its surface even. Subgenital plate conical, obliquely ascendant.

General coloration uniformly yellowish green, with an indistinct paler longitudinal dorsal stripe.

♀ (*paratype*). Much larger than the male. Antennae a little shorter than head and pronotum. Face more convex in profile; frontal ridge less deeply concave, with a distinct median carinula extending from fastigium down almost to the ocellus. Fastigium of vertex rhomboidal, weakly transverse. Elytra reaching the end of sixth tergite, contiguous dorsally; venation well distinct; apex parabolic. Coloration as in the male.

Measurements: see table below.

Tanganyika Territory. Lake Rukwa, 20. II. 1936, 1 ♀; 28. II. 1936, 1 ♀; 15. III. 1936, 2 ♂♂; 15. IV. 1937, 5 ♂♂ (including the type), 5 ♀♀ (*A. Lea*).

The species is named after Mr. A. Lea, locust investigator for the South African Government, who discovered it during his work at Lake Rukwa.

Paratypes of this species will be deposited in the South African Museum, Capetown, and in the Department of Entomology, University of Pretoria.

Afrohippus keyi sp.n. Figs. 19 and 20.

Much smaller and more robust than the genotype.

♂ (*type*). Antennae as long as head and pronotum; their middle joints about twice as long as wide. Face in profile scarcely convex, more reclinate than in *A. leai*; its surface slightly rugulose. Frontal ridge as in *A. leai*, but scarcely punctured near the clypeus and without median carinula near the fastigium. Fastigium of vertex rounded-rhomboidal, longer than wide, rounded anteriorly; surface weakly concave; median carinula as in *A. leai*; foveolae of vertex deep, half as long again as wide, with the upper margin curved and the lower straight. Pronotal sculpture as in *A. leai*. Hind margin rounded. Lateral carinae faintly visible as low smooth lines, straight and weakly divergent backwards. Elytra not quite reaching the base of supra-anal plate; venation as figured. Wings one quarter the length of elytra. Hind femur relatively short and stout. Supra-anal plate as in *A. leai*. Subgenital plate obtusely conical, weakly ascendant.

General coloration pale dirty yellow, with a clear yellow median stripe on the dorsum of head and pronotum; lateral pronotal lobe with an ivory-yellow stripe along the lower margin, extending back to the pleurae. Hind knee with semilunar brown spots on each side.

♀ (*paratype*). Antennae shorter than head and pronotum. Fastigium of vertex transversely elliptical; median carinula not very regular, but extending to the apex. Elytra reaching the middle of the fourth tergit, contiguous dorsally, with acutely parabolic apex; venation distinct. Coloration light brown; lateral pronotal lobe with a light lower marginal fascia bordered above by a wide brown one; elytra with a callous whitish streak in the scapular area.

Measurements: see table below.

Tanganyika Territory. Dar-es-Salaam, III. 1936, 2 ♂♂, 2 ♀♀ (*K. H. L. Key*).

A pair of paratypes of this species will be deposited in the South African Museum, Capetown.

Afrohippus taylori sp.n. Figs. 17 and 18.

The smallest known member of the genus, with the most reduced organs of flight, diverging also in the structure of the vertex, which is convex above and has not concave, but punctured, foveolae. These differences are, however, scarcely of generic value.

♂ (*type*). Antennae shorter than head and pronotum, their middle joints scarcely twice as long as broad. Face as in *A. keyi*. Fastigium of vertex rounded, transverse, surface weakly convex, with a complete median carinula; foveolae of vertex represented by coarsely punctured spaces, which are a little longer than wide. Pronotum sculptured as in *A. keyi*; typical sulcus farther behind the middle than in other species; hind margin rounded-truncate; lateral carinae faintly visible, weakly inflexed in prozona. Elytra reaching the base of supra-anal plate; their bases on the dorsum not contiguous, while the apices are again separated, owing to the anal area being suddenly narrowed apically; venation rather irregular, as figured. Hind femur short and stout. Supra-anal plate with two short oblique submarginal ridges in the basal half. Subgenital plate short, obtuse.

General coloration light brown; head and prozona of pronotum dorsally with two fairly broad blackish stripes; lateral pronotal lobes in the prozona with a broad blackish stripe, enclosing a narrow whitish callous line, which continues forwards on the head behind the eyes; elytra with a broad whitish callous scapular stripe and blackened radials; knees with brown semilunar spots on both sides.

♀ (*paratype*). Elytra fully lateral, widely separated dorsally, oval in shape.

Measurements: see table below.

British Somaliland. Borama district, 43°20'E, 9°55'N, 5,000 ft., XII. 1932-I. 1933, 1 ♂, 3 ♀♀; 42°50'E., 10°35'N., 4,500 ft., rocky ground with practically no vegetation, III. 1933, 1 ♂, type (*R. H. Taylor*).

The paratypic male is of light buff colour with broad black lateral bands.

Afrohippus brevipennis (Miller, 1929).

1929. *Aulacobothrus brevipennis*, Miller, Trans. ent. Soc. London, 1929: 71, pl. X, figs. 54, 54.

Although the type of this species is not available to me at present, there is no doubt that it belongs to the genus *Afrohippus*. Only the female is known, but even that sex presents clear differences from other known species, particularly in the relative measurements of parts, (see table below). In size, *A. brevipennis* approaches *A. leai*, but has much shorter elytra and differs in the coloration, as well as in the complete median carinula of vertex.

Tanganyika Territory. Chilangali, on the Mkata plain, between Morogoro and Kilosa (Miller, l.c.).

Measurements in mm. of *Afrohippus* spp.

Males	Total length	Pronotum	Elytra	Hind femur
A. leai	19	4	12	11
A. keyi	13	3.2	6	8
A. taylori	10.5	2.9	5.5	6
Females				
A. leai	26	5	12.5	14
A. brevipennis . . .	23.5	4.7	7	12
A. keyi	16	3.8	6	10
A. taylori	13.5	3.5	3.2	8

Pnorisa carinata sp.n. Fig. 22.

Differing from the common African *P. squalus* Stal 1860 by larger size; longer antennae, composed of elongate joints; narrower and more prominent pronotal carinae which are not quite straight, but slightly inflexed; and by the relatively longer and narrower hind femur.

♂ (*type*). Antennae a little longer than head and pronotum, slender, filiform, very slightly compressed in the basal portion, composed throughout of strongly elongate joints. Face strongly oblique, but the fastigio-facial angle more broadly rounded than in *P. squalus.* Frontal ridge transversely convex throughout, while in *P. squalus* it is distinctly flattened and even weakly concave at the ocellus. Fastigium of vertex bi-foveolate, with a distinct, though irregular, median carinula. Foveolae of vertex a little more definitely concave than in *P. squalus.*

Pronotal disc with all three carinae narrower and more pronounced than in *P. squalus*; lateral carinae not straight, but weakly incurved in prozona, and more divergent in metazona. Hind margin of pronotum with a distinct submarginal suture, which is usually absent in *P. squalus.* Elytra extending beyond hind knees (not, or scarcely, reaching them in *P. squalus*). Venation generally as in *P. squalus*, but the false vein in the discoidal area more definite; interulnar area broader, with more regularly arranged crossveins. Hind femur 3.5 times as long as its maximum width, *i.e.* less robust than in *P. squalus*, where the same ratio does not exceed 3. Hind tibia distinctly shorter than the femur.

General coloration greyish-buff, with brownish longitudinal stripes and streaks. Elytra with a callous whitish scapular stripe and some blackish spots along the middle. Hind femur on the inside and hind tibia pale orange-yellow.

♀ (*paratype*). Antennae as long as head and pronotum together, filiform, all joints elongate (fig. 22). Pronotal lateral carinae straight in prozona, but divergent in the posterior portion of metazona.

General coloration very pale straw-yellow, with blackish-castaneous lateral stripe which begins behind the eyes, goes on the lateral pronotal lobe and appears again along the discoidal area of elytron and along the upper edge of the externomedian area of hind femur. Hind legs without orange tinge.

Total length ♂ 22, ♀ 30; pronotum ♂ 4.5, ♀ 6; elytra ♂ 19, ♀ 26; hind femur ♂ 14, ♀ 18.5 mm.

French Sudan. Middle Niger, San, VI. 1932, 1 ♀ (*O. B. Lean*); Macina, Sokolo, 31. XII. 1933, 2 ♀♀ (*Mission d 'Etudes de la Biologie des Acridiens*).

Nigeria. Lake Chad area: Wulge, 23. II. 1933, 1 ♀; Kalkala, 5. I. 1933, 2 ♀♀ (*F. D. Golding*); Wurge; 23. VI. 1934, 1 ♀; Abeli Ashemmatari, 22. XII. 1933, 1 ♂, 3 ♀♀; Kalkala, 2. VI. 1934, 1 ♂ (*type*), 1 ♀; 15. X. 1934, 1 ♀; Jillum, 21. X. 1934, 2 ♀♀; Baga Seyoram, 2. X. 1934, 1 ♀ (*A. M. Gwynn*).

Anglo-Egyptian Sudan. Wady Showill near Um-Darag, north-eastern Kordofan, VI-VIII. 1933, 10 ♂♂, 34 ♀♀ (*R. C. M. Darling*).

In Kordofan this species was "common among *Cymbopogon* on heavy clay" (Darling, Bull. ent. Res., 1934, 25:76, as *Pnorisa* sp.n.).

As will be seen from the description of the type and the paratype, this species, like *P. squalus*, has two sharply distinct colour forms, an ordinary and a striped one. In the striped form the lateral pronotal carinae tend to be thicker and more straight, as is typical for the genus *Pnorisa*, but in the ordinary form (the male type) the carinae approach the condition observed in the genus *Aulacobothrus*.

Subfamily **OEDIPODINAE.**

Oedaleus johnstoni sp.n.

A large and unusually robustly built species, differing from all known ones by distinctly rugulose pronotum. Pronotum otherwise similar to that in *O. senegalensis* (Krauss, 1877), which, however, is a smaller and more slender species, with relatively longer elytra and narrower hind femora which are not reddish on the inner side as in the new species; elytral pattern usually much less sharply outlined than in other known species; wing fascia weak and incomplete.

♂ (*type*). Antennae longer than head and pronotum together. Face moderately reclinate, shallowly punctured. Frontal ridge very weakly expanded towards clypeus, shallowly sulcate above the ocellus and more deeply so below it; margins well raised. Fastigium of vertex elongate, not separated from the frontal ridge, lateral margins distinct, surface scarcely concave.

Pronotum of the same general shape as in *O. senegalensis*, but surface wrinkled and punctured even in the prozona. Median carina low, but acute, wavy in profile, its sides on prozona less inflated than in *O. senegalensis*; the first sulcus reaches the median carina, but does not intersect it; the third sulcus a little behind the middle. Lateral lobe wrinkled in prozona and punctured in metazona; a distinct oblique callous tubercle between the second and the third sulcus; lower margin strongly bi-sinuate. Pleurae strongly punctured.

Elytra reaching the end of the basal third of hind tibia, relatively wide and with loose venation; discoidal area less regularly reticulated than in *O. senegalensis*; furcal area wide, irregularly and loosely reticulated and the furcal branch of the radial vein is scarcely raised (in *O. senegalensis* this branch is strongly raised and the furcal area is very narrow and densely reticulated). Hind femur broad in the basal part and rather suddenly narrowed apically. Supra-anal plate scarcely constricted behind the middle. Cercus conical. Subgenital plate conical, a little more elongate than in *O. senegalensis*.

General coloration dull greyish-ochraceous. Head with a light postocular stripe included between two brown ones. The usual pronotal pattern scarcely perceptible. Elytra with alternating light-brown and pale buff fasciae, which are weakly defined. Wing disc very pale yellow; fascia weak, narrow, developed only in the posterior section, well removed from the hind margin; apical portion hyaline, very faintly infumate apically. Hind femur with black dots along carinae, black streaks on the externomedian area and three brown spots above; inner face and lower inner sulcus light-orange-red; knee diffusedly marked with black. Hind tibia light-orange-red, except in the basal third where it is ivory-yellow.

♀ (*paratype*). As the male, very robust for the genus. Coloration with some green areas on the head, pronotum, elytra and hind femur.

Total length ♂ 28, ♀ 39; pronotum ♂ 5.5, ♀ 7; elytra ♂ 25, ♀ 34; hind femur ♂ 15, ♀ 20 mm.

Anglo-Egyptian Sudan. Khartoum, 21. VIII. 1924, 1 ♀ (*H. H. King*); 31. VIII. 1924, 2 ♂♂; 25. IX. 1924, 3 ♂♂ (including the type), 1 ♀; Aroma, short grass, 30. IX. 1926, 1 ♂, 11 ♀♀; Kassala, dry grass, 3. X. 1926, 4 ♀♀; Wad Medani, at light, IX. 1927, 1 ♀; VII. 1928, 1 ♀ (*H. B. Johnston*); unspecified localities, 11 ♂♂, 15 ♀♀ (*Welcome Tropical Research Laboratories*); N. Darfur, Jebel Jerga, 24. IX. 1934, 1 ♀; N. Darfur, clay wady, at light, 9. IX. 1934, 8 ♂♂, 1 ♀ (*R. C. Maxwell Darling*).

Species of *Oedaleus* usually vary in colour from that of green grass to that of the dry, but the present species is more often coloured like bare clay soil, and this, coupled with the robust habitus, gives the species a very distinctive appearance. There is a considerable variation in size, some females being scarcely larger than the males.

The new species is named after Mr. H. B. Johnston, late Government Entomologist in the Sudan and for many years locust investigator in East Africa, who has also paid much attention to studies of general Acridid ecology in that country.

Scintharista zolotarevskyi sp.n.

Allied to *S. notabilis* (Walker, 1870), but different from it in more robust habitus, reminding one of a species of *Pycnodictya*, in the coloration of hind legs, and in the absence of apical spot on wings.

♀ (*type*). Antennae fine, longer than head and pronotum. Head large, somewhat swollen, smooth but dull. Frontal ridge low, margins parallel, diverging and obsolescent near the clypeus; surface obtusely punctured above the ocellus, weakly concave below it. Fastigium of vertex broader and less concave than in *S. notabilis*; its margins low, but distinct; foveolae of vertex broadly triangular, neither concave, nor punctured. Pronotum as in *S. notabilis*, but median carina a little higher, the surface uneven and posterior angle more acute. Elytra extending a little beyond the apex of abdomen; their venation as in *S. notabilis*. Hind femur relatively broader than in *S. notabilis*; upper carina denticulate.

General coloration brownish-ochraceous, mottled with blackish. Elytra without very definite fasciae, with numerous dark spots and streaks. Wings with the disc of the same shade of light-red as in *S. notabilis* and with similar black fascia; apical part hyaline, with partially dark veins, but without a trace of the apical spots. Hind femur on the inside bluish-black; hind tibia grey-blue, with a pale postbasal ring.

♂ (*paratype*). Antennae reaching backwards beyond the base of hind femur. Hind femur inside and hind tibia dark bluish-grey.

Total length ♂ 28, ♀ 40; pronotum ♂ 6, ♀ 8; elytra ♂ 24, ♀ 32; hind femur ♂ 15, ♀ 19 mm.

French Sudan. Nema, pentes du Dahar, 5-7. VIII. 1933, 1 ♀; 9-10. IX. 1933, 2 ♂♂, 2 ♀♀ (*Mission d'Etudes de la Biologie des Acridiens*); Middle Niger, Lake Horo (S. W. of Timbuctoo), VIII. 1932, 2 ♂♂, 2 ♀♀ (*O. B. Lean*).

The specimens from near lake Horo differ from the described type in the coloration of hind tibiae which vary from reddish-yellow to purplish-grey; this may be due either to slight difference in local conditions, or, more probably, to the more advanced state of sexual maturation in the Nema specimens.

The type of this species will be deposited in the Museum National d'Histoire Naturelle, Paris; paratypes will be found in that Museum and in the British Museum.

The species is named after my old friend Dr. B. N. Zolotarevsky, leader of the French locust investigations, whose untiring exploration of the wildest parts of Madagascar and Africa contributed very largely to our knowledge of the locust problem.

PYCNODERUS gen. nov.

Resembling in the general habitus a *Pycnodictya*, but approaching in the elytral venation and in the coloration type a *Gastrimargus*. However, important differences from the latter genus are presented by the thick, tectiform pronotal carina which is deeply cut by the typical sulcus; by the structure of the frontal ridge; and by rugose vertex and pronotum.

Head thick, face and vertex rugulose. Frontal ridge broad, suddenly narrowed below the ocellus. Vertex very broad, convex, imperfectly marginated. Eyes broadly oval; vertical diameter a little greater than the subocular distance. Pronotum thick, tuberculate and rugulose; tectiform above, with the carina inflated in prozona and deeply cut by the typical sulcus. Elytral texture and venation as in *Gastrimargus*. Hind femur broad, rather rapidly narrowed behind the middle.

Genotype:*Pycnoderus sanguinipes* sp.n.

Pycnoderus sanguinipes sp.n.

♀ (*type*). Head thick, rugulose. Face in profile well convex, forming a wide bow with the vertex; its surface up to the subocular sulcus coarsely foveolate and rugulose. Frontal ridge weakly marginate, the margins obsolescent towards the clypeus; surface weakly convex, coarsely foveolate and rugulose. Fastigium of vertex broad, convex, not separated from the frontal ridge; surface foveolate and rugulose. Genae and occiput practically smooth, but not shiny.

Pronotum strongly tuberculate and rugulose. Median carina strongly raised, bi-gibbose in profile, thick and tectiform in prozona, more sharply edged in metazona; metazona longer than prozona, deeply concave on each side of the median carina close to the typical sulcus; hind margin less than 90°, with the apex rounded; lateral lobe tuberculate and foveolate in prozona and densely punctured in metazona. Pleurae with dense and coarse honeycombed puncturation.

Elytra extending to the middle of hind tibiae, hyaline and regularly reticulated in the apical half; basal half very densely reticulated; discoidal area with a well developed false vein; the anterior portion of that area with dense parallel crossveins; the posterior portion with a dense network of thick veinlets; furcal area with a double row of cells.

General coloration brown, with indefinite darker and paler markings. Elytra in the basal half brown, apically paler, with a small spot-like pale postbasal fascia, a roughly triangular pale premedian fascia, extending only from the costal margin to the discoidal vein, an oblique post-median pale fascia reaching the furcal area, and three weak, narrow and irregular hyaline fasciae in the apical portion; anal veins with a conspicuous dull-green streak. Disc of the hind wing pale-yellow; fascia placed nearer to base than to apex, very light-brown, imperfectly defined; obsolescent near costal margin, not touching hind margin; apical portion hyaline, with brown veins and two minute brown spots in the apical lobe. Hind femur with black dots along the carinae, and three indefinite blackish fasciae above; inner side blackish-blue, with a pale pre-apical fascia. Hind tibia sanguineous; condylus black on the inside; a lighter postbasal fascia; apex on the inside with a narrow black margin.

Total length 41; pronotum 11; elytra 35; hind femur 21 mm.

Sierra Leone: Kambia, 6. V. 1929, 1 ♂ (*E. Hargreaves*).

Subfamily **CATANTOPINAE.**

LIMNIPPA gen. nov.

Probably related to *Mesopsilla* Ramme 1929, but well distinct from it in the extraordinarily long ensiform cerci, rudimentary elytra and the hind tibiae specialised for swimming (the structure of the tibiae in *Mesopsilla* has not been described). In the structure of the cerci, the new genus is similar to the Indian *Pseudocarsula* Kirby 1914 and *Calamippa* Henry 1940, differing from both in more widely distant eyes and specialised hind tibiae. The African genus *Xenippa* Stal 1878, still known from the original description only, appears to differ from *Limnippa* in shorter head (only twice the length of pronotum) which is carinated dorsally; more widely separated eyes; weakly carinated foveolae of vertex; distinct median pronotal carina; non-specialised cerci and hind tibiae.

Body very long and slender. Antennae long, ensiform. Head more than twice the length of pronotum, elongate-conical, coarsely but not deeply foveolate in front of the eyes, remotely punctured behind them. Vertex above weakly flattened, with a very faint indication of irregular median line; sides of face rounded transversely; frontal ridge between antennae with smooth, weakly convex surface, further down simply tectiform, becoming lower, slightly wider and very shallowly sulcate near the clypeus; no trace of the foveolae of vertex; lateral facial carina very weak and incomplete. Eyes elliptical, truncate behind; their anterior inner angles somewhat attenuate, very narrowly separated. Occiput more raised than vertex and separated from it by a weak transverse sulcus. Pronotum cylindrical, less distinctly foveolate than the head in its preocular part; no trace of carinae; transverse sulci distinct, the typical one being behind two-thirds of the whole length; lateral lobe with the lower margin wavy. Prosternal tubercle bent backwards; its ventral surface elongate-quadrangular, concave and foveolate. Sternum very long, concave, punctured; mesosternal and metasternal lobes contiguous for a long distance. Elytra lateral, lanceolate, with acute apex, with thick, straight, callous veins. Wings a little shorter than elytra. Abdominal segments strongly elongate. Tympanum long, kidney-shaped, open. Front and middle legs very short. Hind femur almost round, with the carinae and ridges practically obsolete. Hind tibia in the apical part expanded and with acute margins; armed with 11 outer and 19 inner spines, in each case including an apical spine. All tarsi relatively long; arolia very large. Supra-anal plate elongate, with attenuate apex; cercus as long as the head, ensiform; subgenital plate very narrowly conical, attenuated into a styliform process.

Genotype: *Limnippa ensicerca* sp.n.

Limnippa ensicerca sp.n. Figs 32-35.

Light-green, abdomen pale reddish-brown. Antennae reddish below, blackish-purple above. Mandibles bright red. Head behind the eyes, pronotum and pleurae with a few, irregularly distributed, round or oval, purplish-black dots; 5-6 similar dots arranged in a line along the outer face of hind femur; and each abdominal tergite bears two dots on each side, one near the lower hind corner, and another sublaterally on the dorsum and more forward. Elytra with light bluish-green thick veins and dark-brown cells. Hind femur on the inside yellow, with irregularly zigzagged diffuse red pattern. Hind tibia light greenish-blue. Hind tarsus green, with traces of reddish suffusion; arolia pearly-pink. Cercus purple outside, black inside. Underside of body, all legs and cerci with short soft whitish hairs.

Length of body (without cerci) 38; antenna 12; vertex 6; whole head 10; pronotum 4; elytra 6; hind femur 14.5; cercus 10 mm.

Tanganyika Territory. Lake Victoria Nyanza, Luigi Gulf, West of Mwanza, 1-15. IV. 1937, 1 ♂ (*B. D. Burtt*).

According to a note by Mr. E. Burtt, this remarkable grasshopper has been found by his late botanist brother (killed in an aeroplane accident in Africa) in the coastal margin of a papyrus swamp. The whole structure of the insect shows remarkable adaptation to life amongst reeds, probably growing in water, where *Limnippa* is able to swim occasionally. Further collecting in this type of habitat, so unusual for Acrididae, may bring to light other members of this peculiar ecofauna.

Ischnansis burtti sp.n. Figs. 36 and 37.

Strikingly different from the known species of the genus in the larger size, coloration and in the male genitalia.

♂ (*type*). Antennae much longer than head and pronotum, somewhat flattened basally and again near the apex. Face very strongly oblique, coarsely foveolate and rugose. Frontal ridge not sulcate; seen in profile it is strongly prominent above antennae and broadly concave below them. Fastigium of vertex well projecting forward, weakly transverse, shallowly concave. Interocular distance very narrow, shallowly sulcate. Eyes large, strongly prominent. Pronotum weakly sellate; its surface coarsely foveolate. Median carina slightly perceptible, more so in metazona which is much shorter than prozona. Prosternal tubercle conical, inclined backwards. Elytra reaching a little beyond hind knees, narrow; venation less dense than in other species. Wings narrow, with broadly rounded apex.

Last tergite with a transverse, rounded median excision. Supra-anal plate large, transverse, tectiform, with a split-like median furrow which is widened basally; bi-emarginate behind, with a double median projection, and a pair of lateral ones which are curved obliquely upwards (this cannot be seen in the appended figure, but is clearly visible in the lateral aspect); sloping sides of the plate concave, with a transverse series of five ridged tubercles on each side, and an interrupted sublateral ridged carina. Cercus large, recurved vertically and twisted, widening towards the beak-like flattened apex. Subgenital plate very small, strongly transversely conical.

Coloration green above, mostly brown laterally. Hind wings light-blue, lightly infumate apically. Supra-anal plate shiny black, cercus shiny brown-black.

♀ *(paratype)*. Subgenital plate widened apically; hind margin bi-sinuate. Coloration dirty-brown, laterally blackish-brown.

Total length ♂ 23, ♀ 34; pronotum ♂ 4, ♀ 6; elytra ♂ 17, ♀ 24; hind femur ♂ 14, ♀ 18 mm.

Tanganyika Territory. Sigi, near Amani, 1,500 ft 10. V. 1937, 1 ♂ (type), 1 ♀; 2. VI. 1937, 1 ♀; 9. VI. 1937, 1 ♀; 10. X. 1937, 1 ♀ (*E. Burtt*).

This magnificent new species is named after Mr. E. D. Burtt, whose systematic exploration of the Acridid fauna of East Africa, carried out on an ecological basis, has resulted in the most interesting collection ever received by the British Museum from that area. The collection contains many other novelties, which are awaiting description.

Thisoicetrus leani sp.n.

The largest known species, with large black markings on elytra, rose-coloured wings and with blue, or purplish-blue hind tibiae.

♂ *(type)*. Antennae much longer than head and pronotum together, incrassate in the middle. Face strongly oblique, smooth. Frontal ridge gradually narrowed at the fastigium, convex throughout, smooth except for sparse minute punctures. Fastigium of vertex strongly prominent forward, parabolic, about as long as wide, not narrowed behind, weakly concave. Interocular space wide, not narrower than the frontal ridge between antennal bases, with a distinct median carinula which becomes obsolescent on the occiput.

Pronotum with the disc weakly tectiform, rugulose, rounded-truncate behind. Median carina low, but distinct; lateral carinae low, punctured, straight and practically parallel, becoming weaker in the metazona. Transverse sulci practically straight, the third one placed at three-fifths of the whole length. Lateral lobe with honeycombed punctures, interspaces between them smooth, shiny; two irregular smooth but dull spots in the upper part of prozona. Prosternal tubercle cylindrical, incrassate in the apical portion. Mesosternal lobes weakly transverse, the interspace narrow.

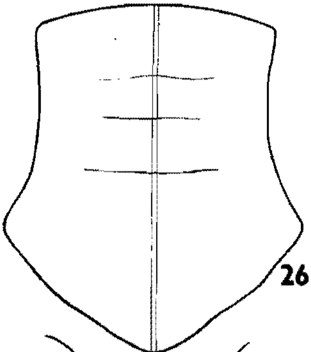
Elytra reaching the apex of hind femur. Hind femur relatively slender. Hind tibia with 11-12 spines on each side. Tarsal arolium large, oval. Last tergite divided in the middle, with a small tooth at the inner angle. Supra-anal plate rounded-triangular, a little longer than wide, with a weak median sulcus in the basal half. Subgenital plate very short and obtuse. Cercus with the apical decurved portion little wider than the basal.

General coloration mainly light-green above and light-brown laterally. Antennae buff above, blackish-brown below. Head with the following parts black, or blackish-brown: frontal ridge in the region of the ocellus, and its margins above the latter, margins of the fastigium of vertex, broad median stripe above, subocular sulcus and margins of labrum, and upper post-ocular stripes. Pronotum above with a broad brown stripe enclosed between two green ones; lateral lobe chocolate brown, becoming almost black along the upper edge, all margins narrowly edged with pale green. Elytra very pale green with about a dozen of fairly large black spots. Wings light rose basally. Apical tergites of abdomen heavily marked with black. Cercus light green. Hind femur externally with the following black markings: a line along the upper edge at the base, an oblong streak, not as wide as half the externomedian area, at the middle of the upper edge, a fascia at the beginning of the narrow portion, and the knee, except the apex of the lobe which is light green; on the inner side there is an irregular darkening near the base, and two complete black fasciae; the knee internally coloured as it is externally. Hind tibia black basally, then with a broad pale ring followed by another black one; the apical half purplish-blue; spines white, black-tipped.

♀ (*paratype*). Much larger than the male, resembling in its general habitus a species of *Cataloipus*. Lower valva of the ovipositor with a rounded projection, not a tooth.

Total length ♂ 35, ♀ 57; pronotum ♂ 7, ♀ 11; elytra ♂ 27, ♀ 40; hind femur ♂ 22, ♀ 33 mm.

Nigeria. Chad area: Kalkala, 15. XI-27. X. 1934, 4 ♂♂ (including the type), 3 ♀♀ (*A. M. Gwynn*); Kano, VII. 36, 3 ♂♂; IX. 37, 1 ♂, 2 ♀♀; Bauchi, VIII. 1936, 2 ♂♂; Bida, VIII. 36, 1 ♀;



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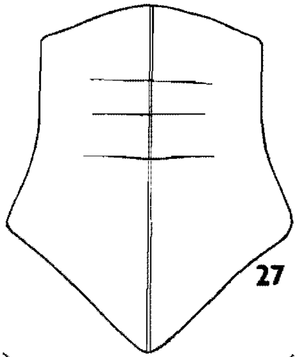

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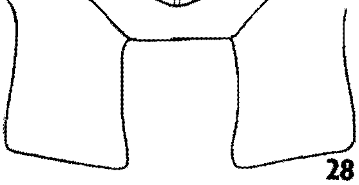

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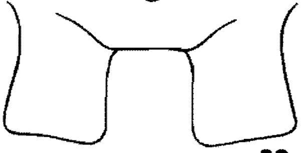

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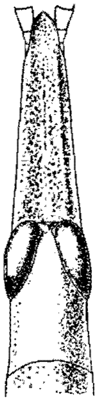

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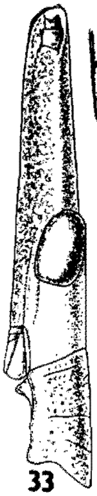

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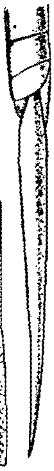

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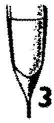

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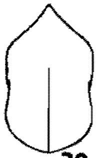

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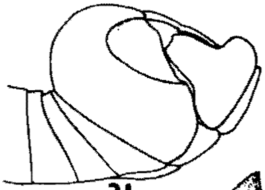

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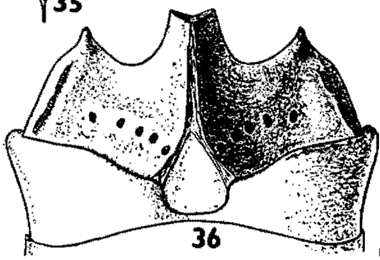

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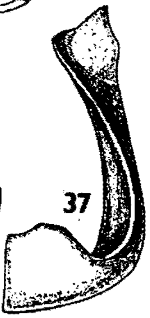

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Cyrtacanthacris tatarica tatarica (L.).
Fig. 26. ♂ outline of pronotum.
28. ♂ mesosternal lobes.

Cyrtacanthacris tatarica abyssinica sbsp.n.
Fig. 27. ♂ outline of pronotum.
29. ♂ mesosternal lobes.

Phyllocercus bicoloripes g. et sp.n.
Fig. 30. ♂ supra-anal plate, dorsal view.
31. ♂ end of abdomen, lateral view.

Limnippa ensicerca g. et sp.n.
Fig. 32 ♂ head from above.
33. ♂ head and pronotum, side view.
34. ♂ apex of abdomen, side view.
35. ♂ apex of abdomen, ventral view (cercus not figured).

Ischnansis burtti sp.n.
Fig. 36. ♂ supra-anal plate from above.
37. ♂ left cercus, from the side.

Zaria, VIII. 36, 1 ♀ (*F. D. Golding*); Kukuma, Bornu province, IX. 1930, 1 ♂, 1 ♀ (*O. B. Lean*).

French Sudan. Sokolo, Macina district, VIII-IX. 1933, 1 ♂, 3 ♀♀ (*Mission d'Etudes de la Biologie des Acridiens*); Middle Niger, Diré Hemgu, VIII. 1932, 1 ♂ (*O. B. Lean*).

This remarkable species is named after Mr. O. B. Lean, pioneer locust explorer on the river Niger and near the Lake Chad.

Amphiprosopia gwynni sp.n. Figs. 23-25.

Differs from *A. adjuncta* (Walker 1870), the genotype and the only known species, by the male external genitalia and by longer wings in both sexes.

♂ (*type*). Antennae longer than head and pronotum, somewhat incrassate beyond the middle. Face well oblique. Frontal ridge convex, sparsely punctured. Fastigium of vertex strongly prominent forward, elongate-pentagonal, with a weak double depression divided by a low median carinula. Pronotum weakly sellate, coarsely punctured. Median carina low, but acute. Lateral carinae distinct in prozona, obsolescent in metazona, which is scarcely longer than half of prozona. Hind margin rounded-truncate. Prosternal tubercle bent backwards, somewhat inflated. Elytra reaching well beyond hind knees.

Two apical tergites of abdomen strongly inflated. Last tergite (fig. 24) with a deep round median emargination. Supra-anal plate quadrangular, longer than wide, weakly constricted basally, with a triangular apical projection (fig. 24). Subgenital plate large, convex, with two incurved apical lobes and an almost circular emargination (fig. 25). Cercus large, foliaceous, oval, with a small black thickened fold near the middle of the lower margin, but without a tooth (fig. 23).

Coloration mainly buff, with greenish-yellow tinge on the upper parts. Subocular sulcus black. Head, pronotum and base of elytra above with a dark brown median stripe, enclosed between two greenish-yellow stripes. Lateral pronotal lobe buff, with brown shading along the upper margin. Elytra with numerous fairly large black spots. Externomedian area of hind femur with a narrow blackish streak along the basal two-thirds of its upper edge; knee with bluish-black semilunar spots. Hind tibia steel-blue, with a narrow pale postbasal ring; spines white with black tips. Hind tarsus dirty-brown.

♀ (*paratype*). Much larger than male. Lateral pronotal lobe with a triangular brown spot in the upper anterior angle. Hind tibia greyish-blue.

Total length ♂ 35, ♀ 49; pronotum ♂ 6, ♀ 10; elytra ♂ 32, ♀ 42; hind femur ♂ 21, ♀ 30 mm.

Nigeria. Lake Chad: Mongonu, 30. IX. 1931, 1 ♂ (*F. D. Golding*); 22. XI. 1933, 7 ♀♀; 16. VIII. 1934, 1 ♂; 3-10. IX. 1934, 3

♂♂, 2 ♀♀; Kalkala, 10. IX. 1933, 1 ♂; 7. VIII. 1934, 1 ♂; 10. IX. 1934, 1 ♂ (type), 1 ♀; Keremia, 17. IX. 1934, 3 ♂♂; Jillum, 21. X. 1934, 1 ♂, 1 ♀, *in copula* (*A. M. Gwynn*).

Elytra of some specimens are somewhat abbreviated, not reaching hind knees, but there are no other differences.

The species is named after Mr. A. M. Gwynn, whose stationary ecological work on the Lake Chad has resulted in a remarkable collection of Acrididae from that little known area.

PHYLLOCERCUS gen. nov.

A member of the group Euprepocnemi, similar to the Indian genus *Eupreponotus* Uvarov, 1921, in the apically inflated male abdomen, but differing from it by the structure of pronotum which is flattened above, by the shape of the male cercus, and by the posterior tarsus of normal length, while it is strongly elongated in *Eupreponotus*.

Antennae moderately long, weakly dilated in the middle. Face distinctly oblique. Lateral ocellus close to the eye, but well distant from the fastigial margin and from base of antenna. Vertex weakly sloping, fastigium narrowly parabolic, weakly concave, with smooth margins and low incomplete median carinula. Lateral facial keels well raised, bow-shaped.

Pronotum with the disc obtusely tectiform, forming distinct, though rounded, angles with the lateral lobes. Median carina well developed throughout, intersected by three sulci. Metazona shorter than prozona, very broadly rounded behind. Lateral lobe moderately convex, with normal sulci; lower margin roundly prominent in the middle. Prosternal spine cylindrical, slightly inclined backwards, with obtuse apex. Mesosternal lobe about as long as broad; interspace narrow in both sexes. Metasternal lobes contiguous in the male, narrowly separated in the female.

Hind femur slender, gradually narrowed towards the apex. Hind tibia with 10-11 spines on each side; spurs normal. Hind tarsus normal, about one third the length of hind tibia. Arolia large, rounded.

♂. Two terminal segments strongly inflated (fig. 31). Supra-anal plate long, with folded margin and acute apex (fig. 30). Cercus very large, foliaceous. Subgenital plate short, with roundly excised apex.

♀. Valvae of the ovipositor very strong, acute, lower valva with a strong lateral basal tooth.

Genotype: *Phyllocercus bicoloripes* sp.n.

Phyllocercus bicoloripes sp.n. Figs. 30 and 31.

♂ (*type*). Antennae longer than head and pronotum. Frontal ridge broad, constricted at the fastigium, weakly convex, densely punctured above the ocellus, less densely below it. Pronotum coarsely and densely punctured all over. Median carina low, but well distinct throughout, shiny; lateral carinae weak, but quite distinct. Elytra extending well beyond hind knees, with loose venation and thin transparent membrane.

General coloration brownish-olivaceous. Antenna fawn above, brown below. Clypeus brown in the middle, yellowish all round, narrowly marginated with black. Mandibles partly black. Face brown, with yellowish lateral stripes. Subocular sulcus black. Cheeks olivaceous, but posterior orbits of the eyes yellowish. Head above with a velvety brown median stripe, included between two yellowish ones; these stripes continue on to the disc of pronotum. Lateral pronotal lobe brownish olivaceous. Elytra hyaline, weakly infumate. Wings hyaline. Hind femur without any pattern, except bluish-black semilunar spots on the knee. Hind tibia in the basal half light-blue, with a narrow yellowish postbasal ring, in the apical half light red; spines white, with the apical third black. Hind tarsus light red.

♀ (*paratype*). As the male, but much larger.

Total length ♂ 23, ♀ 36; pronotum ♂ 4.5, ♀ 6.5; elytra ♂ 22, ♀ 33; hind femur ♂ 16, ♀ 24 mm.

French Sudan. Middle Niger, Diafarabé, IX. 1932, 5 ♂♂ (including the type), 6 ♀♀ (*O. B. Lean*); Macina, Dia, 13. I-17. II.1933, 2 ♂♂, 4 ♀♀; Macina, Sokolo, 1. IX. 1933, 1 ♀, X. 1933, 1 ♀ (*Mission d'Étude de la Biologie des Acridiens*).

Nigeria. Mongonu, 28. IX. 1931, 1 ♀; Marte, 28. IX. 1931, 1 ♀; (*F. D. Golding*); Lake Chad, Kalkala, 26. IX. 1934, 1 ♀; 16. X. 1934, 1 ♀ (*A. M. Gwynn*); Gadau, 4. VIII. 1937, 1 ♂ (*T. A. M. Nash*).

The Nigerian specimens are somewhat larger than the typical series, but do not differ otherwise.

Paratypes of this species will be deposited in the Museum National d'Historie Naturelle, Paris.

Cyrtacanthacris aeruginosa goldingi sbsp.n.

General coloration light yellowish-green; pronotum above with two not sharply defined velvety-brown stripes; lateral pronotal lobe with a broad brown stripe near the lower margin which is bordered by yellowish-green; elytra uniformly brownish, with the main veins red and with greenish-yellow costal and anal stripe; hind tibia yellowish-green, spines distally red, black-tipped. Habitus slender, elytra relatively long.

Total length ♂ 53, ♀ 62; pronotum ♂ 13, ♀ 15; elytra ♂ 50, ♀ 64; hind femur ♂ 28, ♀ 35 mm.

Nigeria. , Lake Chad: Kalkala, 7. II. 1937, 1 ♂; Shuari 4. XI. 1931, 1 ♀; Gusko, 10. X. 1931, 1 ♀ (*F. D. Golding*); Wurge, 24. X. 1934, 2 ♂♂ (including the type); Kalkala, 11. IX. 1934, 1 ♀ (*A. M. Gwynn*).

The new subspecies differs from all known ones (see Uvarov, 1924, Ann. & Mag. Nat. Hist., ser. 9, 13:99) by the general coloration and especially that of the hind tibiae. It is somewhat similar to the South African *C. aeruginosa aeruginosa* (Stoll 1813), but is more slender and with longer elytra which are not spotted.

The subspecies is dedicated to Mr. F. D. Golding, Government Entomologist of Nigeria, whose thorough investigations on the Acrididae on the shores of the Lake Chad (see Bull. ent. Research, 1934, 25:263-303) constitute a valuable pioneer contribution to the ecology of these insects in tropical Africa.

Cyrtacanthacris tatarica abyssinica sbsp.n. Figs. 27 and 29.

Differs from the widely distributed typical subspecies in the following features· size smaller, but the habitus more robust; pronotum less constricted, acutely produced behind, with the metazona distinctly longer than prozona and with the median carina more raised and subacute; mesosternal lobes relatively shorter, with the inner angle not less than 90°; mesosternal interspace not constricted posteriorly, with straight margins. Differences in size and proportions between the two subspecies can be seen from the following table:

	Male		Female	
	tatarica	*abyssinica*	*tatarica*	*abyssinica*
Total length	48	37	4.3	49
Pronotum	10	9.5	60	12.5
Elytra	45	32	13	45
Hind femur	24	19	56	28
Ratio hind femur: pronotum . . .	2.4	2.0	32	2.2
Ratio elytra: pronotum	4.5	3.4	2.4	3.6

The table shows that *abyssinica* is smaller absolutely, has relatively longer pronotum and relatively much shorter elytra.

The coloration and pattern in the two subspecies do not differ greatly, although in *abyssinica* there is a tendency for the elytral black spots to become larger and confluent.

Abyssinia. Mt. Chillalo, circa 8,000 ft., 11. XI. 1926, 3 ♂♂ (including the type), 1 ♀; ditto, „moorland, from short turf dotted with bush-heath", 10,000 ft., 22. XI. 1926, 3 ♀♀; Djem-Djem forest, 8-9,000 ft., 22-26. IX. 1926, 1 ♂ (*Dr. H. Scott*); plain of Deda, Webbi, „vast open plain, some cultivation, few trees; fairly numerous in tall grass three feet high, very near pools", 4. XI. 1933, 3 ♂♂, 4 ♀♀ (*W. Thesiger*).

As I have had an occasion to remark (Ann. & Mag. nat. Hist., 1924, ser. 9, 14:92) *C. tatarica* is a species remarkable both for its very wide distribution area, comprising the whole of tropical Africa, southern Arabia and India, and for the great constancy of its characters which are not subject to any appreciable geographical variation. It is, therefore, particularly interesting to find a very clearly defined subspecies in Abyssinia, where it is obviously confined to highlands, since I have before me some specimens of the typical subspecies from the following localities in that country: Hawash station (*W. Thesiger*); between Hora Abjata and Hora Shala, circa 5,000 ft.; S.E. of Lake Zwai, circa 5,500 ft. (*J. Omer-Cooper*).

The acarine parasites of South African acridids, with special reference to the genus Podapolipus.

by

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This paper is the result of studies, carried out by the author, on the species of acarines parasitic on acridid locusts (Orthoptera) collected up to the time of the writing of this paper. No serious attempt has been made in South Africa to summarise our knowledge of these mites, with the exception of a short paper of a general nature, published in 1940 by Lawrence (1). In this paper, Lawrence's results have been extended and a full account of the South African members of the genus *Podapolipus* is given.

The author wishes to tender his grateful thanks to Dr. B. P. Uvarov of the Imperial Institute of Entomology and Mr. E. Browning of the British Museum for making tracings of drawings and copies of descriptions of *Podapolipus*, from journals not obtainable in South Africa. To Dr. R. F. Lawrence and Dr. S. F. Bush, both of Pietermaritzburg, the author owes much for their encouragement and the loan of apparatus.

Previous work on mites infesting locusts.

The mites which spend either a part or the whole of their existence on locusts and grasshoppers, belong to five distinct families — Trombidiidae, Erythraeidae, Tarsonemidae, Tyroglyphidae and Tydaeidae. In South Africa, all these families are represented, particularly the first two, and an interesting species belonging to the last named family has now come to light, making it the second member of its group to occur on an acridid host.